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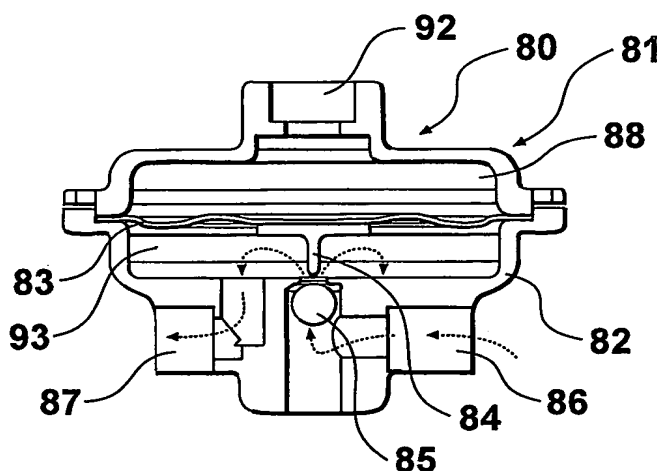
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(54) Title: FLUID HEATER



(57) Abstract: A portable fluid heating tool capable of  
heating a flow of water under mains pressure to about  
107 degrees Celsius and has a connection to a water sup-  
ply via a hose. Water flows through an electrical heater  
within the tool, then to a thermally controlled pressure  
regulating valve (80) and then to the outlet nozzle. This  
valve (80) has a moveable member such as a diaphragm  
(83) sealing off a pressure chamber (88). Movement of  
the diaphragm (83) causes a valve (85) to open or at least  
partly close. When closed the valve (85) impedes, or  
restricts the flow of water from an inlet (86) to an out-  
let (87) through the valve. On the other side of the di-  
aphragm a small quantity of water is trapped within the  
pressure chamber (88), so that as the valve (80) heats  
up, pressure within the pressure chamber (88) rises as  
the water turns to water vapour and the air within the  
chamber also expands. This increase in pressure within  
the pressure chamber (88) causes the diaphragm (83) to  
move slightly outwardly causing a pin (84) to allow

the ball valve (85) to open and allow maximum flow of the heated water through the valve (80) to the nozzle of the tool.



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